

REMARKS

Claim 5 has been amended. Thus, claims 1-6 remain presented for examination. Support for the claim amendment may be found in the specification at page 17, line 19 to page 19, line 20. Since this amendment does not add new matter, entry thereof is respectfully requested.

Rejections under 35 U.S.C. § 112, second paragraph and 35 U.S.C. § 101

Claim 5 was rejected under 35 U.S.C. § 112, second paragraph and 35 U.S.C. § 101, because the claimed method recited a use without setting forth any steps involved in the method/process. Because claim 5 as amended recites positive steps for performing the method, reconsideration and withdrawal of these rejections are respectfully requested.

Rejection under 35 U.S.C. §103(a)

Claims 1-6 were rejected under 35 U.S.C. §103(a) as being unpatentable over Hattori et al. (EP 762208 A2). The Examiner alleges that given the suitable monomers listed for the resin by Hattori et al., that it would have been obvious to use monomers such as (meth)acrylic acid, hydroxyethyl(methacrylate) (instant formula(I)), and a functional (meth)acrylic compound, and that one of ordinary skill in the art would have been motivated to choose cyclohexyl(meth)acrylate as a component of class (6) in the place of methyl (meth)acrylate in polymer 10.

Hattori et al. disclose copolymers 1-3 and 10 on pages 6 and 8, respectively. A methyl(meth)acrylate unit can be incorporated into these copolymers in a maximum amount of 30% by weight. Thus, even if the methyl(meth) acrylate unit is substituted with a cyclohexyl(meth)acrylate unit, these copolymers do not satisfy the recitation in present claim 1 which recites a resin component containing (a) from 61 to 90% by weight of a structural unit derived from a cyclic alkyl (meth)acrylate ester. Thus, this percentage range is neither disclosed nor suggested by Hattori et al.

Importantly, a significant, unexpected effect is observed when the amount of structural unit (a) contained within component (A) is from 61 to 90% by weight. As disclosed in the specification at page 4, lines 18-25 and page 5, lines 1-6:

By incorporating from 61 to 90% by weight (and preferably from 65 to 75% by weight) of the structural unit (a) within the component (A), the alkali developability of the thick film photoresist composition of the present invention can be improved. As a result, the resolution and adhesion of the composition can be improved, and the level of developing residues can be reduced. In addition, the co-solubility with the component (B) and the organic solvent (D) described below can also be improved. Furthermore, high sensitivity can be achieved even when a thick film resist pattern is formed. By ensuring a proportion of at least 61% by weight, satisfactory manifestation of the above effects can be achieved, whereas ensuring a proportion of no more than 90% by weight enables a more favorable balance to be achieved with the other structural units such as the aforementioned structural unit (b), and enables the suppression of pattern cracking, which is caused by the resist pattern becoming overly hard and then cracking, either due to impacts sustained during the plating or the like conducted following resist pattern formation, or due to thermal shock.

In the Examples provided in the present specification at pages 20-23, samples A and D-H, in which the structural unit (a) is incorporated within component (A) in an amount ranging from 65 to 75% by weight, results in superior adhesion, resolution, developing residues and plating characteristics (wetting) compared to sample B in which the structural unit (a) is incorporated in an amount of 35% by weight; and compared to sample C in which the structural unit (a) is incorporated in an amount of 40% by weight (see Tables 1 and 2). Thus, the use of the recited percentages provides unexpected advantages compared to when the prior art percentages are used. These unexpected advantages of the resulting thick film photoresist compositions could not have been predicted by Hattori et al, and would thus effectively rebut any *prima facie* case of obviousness if one were present. Since claims 2-6 depend on claim 1, either directly or indirectly, they are also not rendered obvious by Hattori et al.

In view of the comments presented above, Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. §103(a).

CONCLUSION

Applicants submit that all claims are in condition for allowance. However, if any minor matters remain that could be resolved by teleconference, the Examiner is invited to contact the undersigned at the telephone number provided below. Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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